

**Claims**

1. A method of automatic creation of a talk group in a  
5 wireless radio communication system (100) comprising a  
plurality of mobile stations (102 - 116), said method  
comprising the steps of:
- a) transmitting (200) by a first mobile station (102)  
an emergency message containing at least its ID and  
10 localization data and indication that this is an  
emergency message;
  - b) transmitting (202) by other mobile stations their  
IDs and localization data in response to said  
emergency message;
  - 15 c) creating (206) said talk group by selecting those  
mobile stations which transmitted their IDs and  
localization data.
2. A method according to claim 1, wherein only those  
20 other mobile stations, which are within a predefined  
distance from said first mobile station transmits their  
IDs and localization data.
3. A method according to claim 2, wherein for  
25 communication system operating in trunking mode said  
predefined distance is limited to the borders of a cell  
within which said first mobile station is located or to  
a group of cells.
- 30 4. The method according to claim 2 or 3, wherein said  
other mobile stations, which distance from said first  
mobile station is larger than said predefined distance,  
transmit their localization data if there is no other  
mobile station within said second predefined distance.

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5. The method according to claim 4 comprising the step of:

- 5 a) increasing said predefined distance if no one of said other mobile station responded to said emergency message;
- b) re-sending said emergency message.

10 6. The method according to claim 1 or claim 5, wherein said other mobile stations transmit their IDs and localization data with a predefined delay and said predefined delay increases with increasing distance from said first mobile station.

15 7. The method according to claim 1 or claim 6, wherein only those of said other mobile stations which are within a predefined distance from said first mobile station are selected to said talk group.

20 8. The method according to claim 7, wherein some of said other mobile stations, which are located beyond said predefined distance, are selected to said talk group if there is no one of said other mobile stations within said predefined distance or the number of said other mobile stations is below a predefined threshold.

25 9. The method according to any one of preceding claims, wherein after receiving said IDs and localization data of said other mobile stations, said step of selecting is performed by said first mobile station.

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10. The method according to claim 9, wherein after creation of said talk group information on said talk group is transmitted to a dispatch centre, said

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information includes IDs of members of said talk group and their localization data.

- 5       11. The method according to any one of claims 1 - 8, wherein after receiving said IDs and localization data of said other mobile stations, said step of selecting is performed by an infrastructure.
- 10       12. The method according to any one of preceding claims, wherein at least one an emergency service unit, located closest to said first mobile station is added to said talk group.
- 15       13. The method according to any one of claims 10 - 12, wherein a dispatch centre transmits driving directions to said emergency service unit.
- 20       14. The method according to any one of preceding claims, wherein said localization data are Global Positioning System Data or triangulation based data.
- 25       15. The method according to any one of preceding claims, wherein said emergency message contains also an indication what type of emergency service is requested.
- 30       16. The method according to any one of preceding claims, wherein said emergency message is transmitted to a dispatch centre, and said dispatch centre forwards said emergency message to said other mobile stations.
17. The method according to any one of preceding claims, wherein said dispatch centre is added to said talk group.

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18. A mobile station comprising means for signal transmission (602, 604, 606), means for signal reception (608, 604, 606), a microphone (620), an audio processing circuitry (624, 626), a keypad (616), a microprocessor (610), a memory (612), a localization circuitry (614),  
5 **characterized in that** it further comprises an emergency switch (622) being adapted to initiate transmission of an emergency message, said emergency message comprising localization data, ID of said mobile station and an  
10 indication that this is emergency message.

19. The mobile station according to claim 18 being adapted to receive emergency messages from other mobile stations.

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20. The mobile station according to any one of claims 18 or 19 being adapted to send its ID and localization data in response to emergency message received from any one of said other mobile stations.

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21. The mobile station according to any one of claims 18 - 20 being adapted to receive response to emergency message from said other mobile stations.

25 22. The mobile station according to claim 19 or claim 21, wherein said microprocessor being adapted to calculate distance between said mobile station and any one of said other mobile stations.

30 23. The mobile station according to any one of claims 18 to 22, wherein said microprocessor is adapted to store in said memory localization data and IDs received from said other mobile stations.

24. The mobile station according to claim 23, wherein said microprocessor is adapted to calculate distances between said first mobile station and any one of said other mobile stations which have responded to said emergency message and create a talk group comprising other mobile stations based on said calculated distances.

25. The mobile station according to any one of claims 18 to 24 wherein said localization circuitry is a Global Positioning System unit.

26. The mobile station according to any one of claims 18 to 24 wherein said microprocessor is adapted to calculate localization of said mobile station based on triangulation data.